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WHAT IS CLAIMED IS:

1. An add/drop module connected to an optical signal for transmitting a multiplexed optical signal in a wavelength division multiplexing optical transmission system, and adapted to add drop a channel for the optical signal, comprising:

5 a first circulator having first through third ports that are both connected to an optical fiber, the first circulator outputting an optical signal, input to the first port, to the second port, and outputting an optical signal, input to the second port, to the third port;

an optical multiplexer/demultiplexer having a multiplexing port connected to the second port of the first circulator, and adapted to provide a passage for the optical signal,

10 and a plurality of demultiplexing ports respectively adapted to provide passages for demultiplexed channels of the optical signal; and

a plurality of add/drop units each including

a second circulator having first through third ports, a second port of the second circulator being connected to an associated one of the demultiplexing ports, the second circulator outputting a channel, input to the second port, to the third port and outputting a channel, input to the first port, to the second port, and

an optical switch having first through fourth ports while being connected at the first port to the third port of the second circulator, and at the third port to the first port of the second circulator, the first port of the optical switch being selectively connected either the third port of the optical switch to establish a path for a channel to be passed or the fourth port of the optical switch to establish a path

for a channel to be dropped, the second port of the optical switch being selectively connected with the third port of the optical switch to establish a path for a channel to be added.

2. The add/drop module according to claim 1, wherein the optical
5 multiplexer/demultiplexer comprises a waveguide grating router.

3. An add/drop module for a wavelength division multiplexing optical transmission system, comprising:

a first circulator having a plurality of ports, the first circulator being connected to
10 an optical fiber;

an optical multiplexer/demultiplexer connected to the first; and

at least two add/drop units each including

a second circulator having a plurality of ports, at least one port being connected to a demultiplexing port of the optical multiplexer/demultiplexer, and

15 an optical switch having a plurality of ports, two ports being connected to respective ports of the second circulator, another port of the optical switch being selectively connectable to either establish a path for a channel to be passed or to establish a path for a channel to be dropped.

4. The add/drop module according to claim 3, wherein the add/drop unit also include a further port of the optical switch that is selectively connectable to establish a path

for a channel to be added

5. The add/drop module according to claim 3, wherein the optical multiplexer/demultiplexer comprises a waveguide grating router.

6. The add/drop module according to claim 3, wherein the first circulator includes
5 first through third ports that are both connected to the optical fiber, the first circulator outputting an optical signal, input to the first port, to the second port, and outputting an optical signal, input to the second port, to the third port.

7. The add/drop module according to claim 3, wherein the optical
10 multiplexer/demultiplexer includes a multiplexing port connected to the second port of the first circulator, and adapted to provide a passage for the optical signal, and a plurality of demultiplexing ports respectively adapted to provide passages for demultiplexed channels of the optical signal

15 8. The add/drop module according to claim 6, wherein the second circulator includes first through third ports, a second port of the second circulator being connected to an associated one of the demultiplexing ports, the second circulator outputting a channel, input to the second port, to the third port and outputting a channel, input to the first port, to the second port

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9. An add/drop unit for an add/drop module for a wavelength division multiplexing optical transmission system, the add/drop unit comprising:

a circulator having a plurality of ports, at least one port being connectable to a demultiplexing port of an optical multiplexer/demultiplexer, and

5 an optical switch having a plurality of ports, two ports being connected to respective ports of the second circulator, another port of the optical switch being selectively connectable to either establish a path for a channel to be passed or to establish a path for a channel to be dropped.

10. The add/drop module according to claim 9, wherein the add/drop unit also include a further port of the optical switch that is selectively connectable to establish a path for a channel to be added.

10 11. The add/drop module according to claim 10, wherein the circulator includes first through third ports, a second port of the second circulator being connected to the demultiplexing port, the second circulator outputting a channel, input to the second port, to the third port and outputting a channel, input to the first port, to the second port

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